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Author(s): SIMON WARTNABY

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SIMON WARTNABY

Gun Wharf, in Dock Road, Chatham, Kent, was designed by Arup Associates for Lloyd's of London and used from 1978 to 2006 as their administrative offices. In 2007 it became the headquarters of Medway Council.¹ This article discusses what makes Gun Wharf such an exemplary 1970s building.

The building lies on an important waterside site commanding a bend in the River Medway with panoramic views across to Rochester, one of the most historic towns of Kent. It is located in Chatham Royal Naval Dockyard, on three terraces. The lower had been the site of a Tudor royal dockyard that in the early eighteenth century had expanded significantly with the construction of the Grand and New Storehouses.² On the two upper terraces the Royal Marine's barracks were built in the late eighteenth century, and enlarged in the nineteenth. The storehouses and barracks were demolished by the Admiralty just before the site was sold in 1958, at a time when their loss was not seriously questioned. The adjacent dockyard was closed totally in 1984, when the historic estate was transferred to a Trust. Its historic importance was recognised in 1999 when it was placed on the shortlist of the UK Government's World Heritage Site nominations. It is described there as the supreme example of a royal dockyard, largely unaltered from the age of sail when the Royal Navy was instrumental in Britain's global influence, and when dockyards were the largest industrial centres in Europe. Gun Wharf itself lies in the Brompton Lines Conservation Area.

Gun Wharf was built for Lloyd's, one of the most important global insurance markets and a foundation of the City of London's wealth. Lloyd's were expanding in the 1970s, as well as facing technological changes and increasing central London office rents and staff costs. Its management set up a working party in 1970 to look at their long-term office requirements, which recommended decentralising the administrative departments from the City. After a long search, the Chatham site was chosen in 1973 and bought in March 1974. By June 1975 Lloyd's had both government approval and planning permission. Bovis were appointed the management contractor in July, and took possession in September of that year. Construction started in January 1976, and was completed July 1978, with staff moving in by September.³ Lloyd's outsourced their services in 2001 to Xchanging, who took over Gun Wharf but by 2006, with fewer staff, they had moved to a smaller building nearby. In 2007 the local authority, Medway Council, saw the advantages of the location, quality and adaptability of Gun Wharf and bought it as their new headquarters, moving in the following year.

To design their new building, Lloyd's selected Arup Associates, who were one of the largest architectural practices in the country and, unusually, a multi-disciplinary one that included architects, engineers and quantity surveyors among the partners.⁴ Ove Arup (1895–1988) had established it in 1963 under the leadership of the architect Philip Dowson (who had joined Arup's engineering firm in 1953) together with the engineers Ronald Hobbs and Derek Sugden. Dowson had developed a distinctive rational design approach to function, constructional technique, and use of materials. In the 1960s he evolved a grid

Figure 1. Gun Wharf, the main staircase (level 2) looking towards the main entrance on level 3, c.1978. (Arup)

1. Mike Maddison, 'Lloyd's aim for quality', *Concrete*, vol.14, no.4, April 1978, pp.16–18; Gordon Wigglesworth, 'Administrative headquarters, Lloyd's Chatham', *Architects Journal*, vol.173, no.5, 4 February 1981, pp.199–217. See also Peter Murray & Stephen Trombley, eds, *Modern British Architecture since 1945*, London, Muller, 1984, pp.116–17, and Courtenay Blackmore, *The Client's Tale, the Role of the Client in Building Buildings*, London, RIBA, 1990.

2. The Grand Storehouse, c.1717, was possibly by Vanbrugh.

3. In April 1978 Lloyd's interviewed two finalists for their new City headquarters – Arup Associates and Richard Rogers and Partners – and chose Rogers.

4. Arup Associates' work is documented in Michael Brawne, *Arup Associates*, London, Lund Humphries, 1987; *Arup Associates*, London, 1990; *Arup Associates*, Victoria (Australia), Images Publishing Group, 1994.



Figure 2. Gun Wharf, waterside frontage with 18th century Dockyard Ropery building beyond c.1978. (Arup)

approach to planning which was applied to Gun Wharf by the project architect, Claire McDonald.

AN EXEMPLARY BUILDING

Gun Wharf was designed at a time of economic crisis and architectural fracture following the perceived failure of Modernism. There were new imperatives for architecture, and Gun Wharf tells us about three of these: contextualism, humane spaces and environmental management.

CONTEXTUALISM

An important 1970s aesthetic seen in Gun Wharf is its relationship with the buildings of the neighbouring dockyard. Lloyd's wanted their building to merge with its historic setting, although there was no planning requirement to do so. Arup Associates achieved this by the siting and form of the building, and by its materials.

The careful siting of Gun Wharf can be seen in Martin Charles's photograph, taken for the *Architects' Journal*.⁵ The new, low building has been placed on the river frontage following the lines of the immensely long eighteenth-century Ropery. The horizontal emphasis of the new building merges with the adjoining dockyard buildings set on terraces, and with the Kitchener Barracks and wooded Brompton Lines on the rising ground behind. Gun Wharf was designed as a bookend to the Ropery, and steps down towards the church to the south.

5. *Architects' Journal*, *op.cit.*, p.199.

The materials are red brick and a grey Redland cement tile on a pitched roof, echoing the brick and pitched slate roof of the Ropery. Thus Gun Wharf reinforces the sense of place and history and, according to Murray and Trombley, 'fits its site as though it had always been there'.⁶

The use of vernacular materials and form was characteristic of the 1970s. In Charles Jencks's *The Language of Post-Modern Architecture* (1977) he illustrates such examples as Lillington Gardens (1961–8, 1967–70) by Darbourne and Darke, which contextualises the housing with G. E. Street's adjoining St James the Less, and Hillingdon Civic Centre (1975–7) by Robert Matthew, Johnson Marshall and Partners.⁷ The concern for contextualism and the vernacular revival can also be seen in Essex County Council's *Design Guide for Residential Areas* (1973), and the influential exhibition *Architecture Without Architects* held in 1974 at the Institute of Contemporary Arts.

HUMANE SPACES

Offices were one of the most important building types of the twentieth century. A characteristic of their planning in the 1970s was to create a more humane office environment than the low, flat ceilinged offices typical of the 1960s. Arup Associates' strategies for achieving humane spaces in deep plans incorporated the ideals of *bürolandschaft* (office landscape) as pioneered by the Quickborner team in Germany in the late 1950s. *Bürolandschaft* drew on modern organisational theory, psychology, and anthropology to introduce to the office environment a greater equality, improved organisation and, importantly, adaptability to future needs. In Britain the concept was promoted by Francis Duffy, who wrote one of the first British texts, *Office Landscaping*, in 1969, and founded the office planners DEGWA.⁸ But, quietly, Arup Associates were pioneers in the

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6. Murray & Trombley, *op.cit.*, pp.116–17.

7. Charles Jencks, *The Language of Post-Modern Architecture*, London, Academy Editions, 1981. pp.96–103.

8. Frank Duffy, *Office Landscaping*, London, Anbar, 1969.

Figure 3. Gun Wharf, plan of entrance level 3, c.1978. (Arup)

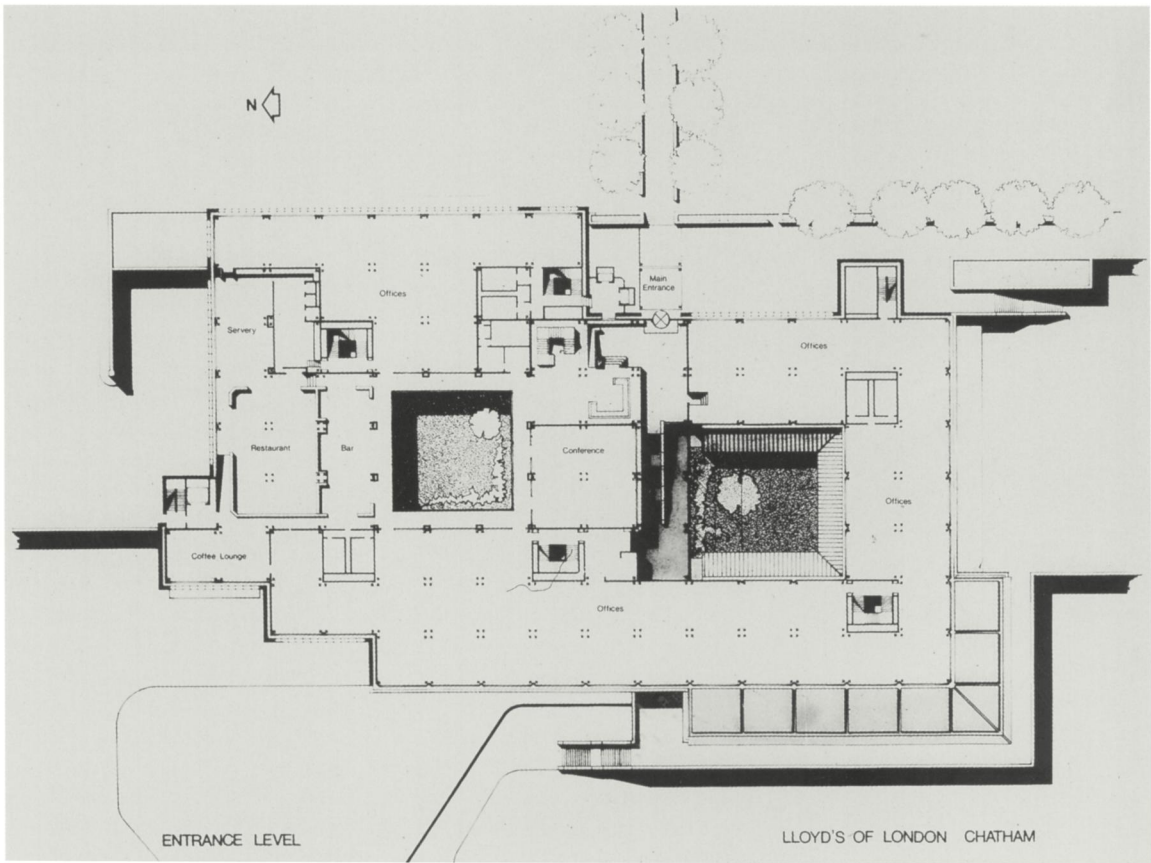




Figure 4. Gun Wharf, A partitioned office with truncated pyramid ceiling, c.1978. (Arup)

actual building of *burölandschaft*, with examples like their offices for Penguin Books at Harmondsworth (1970–2, demolished).

At Gun Wharf, Arup Associates introduced humane spaces by using a module of a ‘tartan’ grid, with a 7.2m bay that relieved the ubiquitous large, deep, open plan office. The bay was structural, using four concrete columns supporting a truncated pyramid roof, which in turn supported the floor above.⁹ The truncated pyramid ceiling allowed space for services, which was referred to as ‘the constructed void’.¹⁰ A vertical service duct was formed where the columns of the bays met. The grid was constructed in such a way as to be capable of flexible subdivision in half or quarter segments. Dowson said that the grid created ‘carefully made places ... that establish an underlying order,’ which Alan Powers argues made an important contribution to the development of office typology.¹¹ Dowson had first used the grid in the Mining and Metallurgy Laboratories at Birmingham University (1963). He developed it further in 1973, when Arup Associates were commissioned to design three low-rise office buildings, for Lloyd’s of London (1973–8); for Wiggins Teape with Gateway 1 in Basingstoke (1973–6); and for the Central Electricity Generating Board in Bristol (1973–8). Dowson hoped that the 7.2m bay at Gun Wharf would encourage groupings of people, although, Wigglesworth comments, this did not work in practice.¹² The structural bay, however, did create a high quality working environment with the sense of a smaller and comfortable space, which the current occupiers appreciate.

Arup Associates’ modular plan is organised as a hierarchy of easy to read spaces from the entrance through to the pavilions with their green courtyards. The main entrance *porte-cochère* cleverly uses the constructional post and

9. The reinforced concrete columns and the pyramid roofs were cast in-situ.

10. John Winter suggests the origin of the pyramid ceiling in Louis Kahn’s Trenton Bathhouse (1957).

11. Alan Powers, *Britain*, London, Reaktion, 2007. p.193.

12. *Architects’ Journal*, *op.cit.*, p.199.

truncated pyramid bay as a semiotic sign to the construction of the whole building. From the entrance there are two views of the main internal components: the two staircases that access the rest of the building and the two courtyards which lead to the other entrances. Perhaps the most impressive space is the generous double height staircase down to Level Two, which flows to the south courtyard and gives access to the two lower terraces. The original decorative scheme is complete, with public thoroughfares in dark paviments that flow from the inside to the outside terraces. The same paviments also serve as tiles to line the stairwells. The carpeting in the offices and the light oak panelled walls survive in very good condition throughout the building.

ENVIRONMENTAL MANAGEMENT

Lloyd's move to Chatham in 1973 coincided with the international oil crisis, and was a time of increasing ecological concerns. These were demonstrated in the exhibition *How to play the environment game* that year, curated by Theo Crosby.¹³ It warned about the effect of modern materialism on the environment, and that the 'fallacy of the limited life building has been inherent in the modern movement ... and the short term methods of building finance have also reinforced the tendency to build cheap and shoddy'.¹⁴ Crosby suggested that one of the strategies for survival was to build more permanently, and solidly, in a way that was easily adaptable so that services could be changed without damaging the building, and with alternatives to air conditioning.¹⁵ At Gun Wharf Arup Associates addressed the issue of sustainability in this way. They also tackled that of energy efficiency, by what Reyner Banham referred to as 'selective' and 'regenerative' modes in his influential *The Architecture of the Well-tempered Environment* (1969). The 'selective' concept 'employs structure not just to retain desirable environmental conditions, but to admit desirable conditions from outside'.¹⁶ Gun Wharf introduced several energy saving strategies. Firstly, the need for air conditioning was lessened by having overhanging eaves, screens, blinds, and opening windows to reduce solar gain. Secondly, there was less need for lighting where large windows were used and deep plans reduced. Thirdly, with the main entrance on the central level three there was no need for escalators and fewer lifts were required.

CONCLUSION

The *Architects Journal* asked 'how will the architectural historians see Arup Associates' buildings looking back in a few decades from now?'¹⁷ Since that article was written it has been recognised that Gun Wharf exemplifies a good 1970s office building.¹⁸ Conceived at a time of uncertainty, economic crisis and environmental concerns, it successfully addresses these challenges through imperatives that are just as important today. With its contextualism it successfully mediates its historic setting and enhances the sense of place in Chatham dockyard, which is now recognised by government as a potential World Heritage site. There is a humanity in Gun Wharf, achieved through the 'tartan' grid, which is also significant in adding to the typology of the twentieth century office. The grid has led to the building's successful adaptability which has enabled its continued use as offices by Medway Council, whose staff have found it a good building to use. The energy efficiency of the building is a central concept of the design, as are its flexibility and serviceability. Gun Wharf was deeply thought about, enhances the sense of place, and is 'powerful outside and beautiful inside'.¹⁹ It is in good condition, little has been changed and it serves its purpose well. It still teaches us important and relevant issues for architecture today in the continuing quest for better models of sustainability, energy efficiency and working environment. Furthermore, the building now provides a fitting, significant and symbolic location as the offices for Medway Council, on a prominent site at the centre of local regeneration in the conurbation.



Figure 5. Gun Wharf, Southern Courtyard, c.1978. (Arup)

13. Arts Council exhibition at the Hayward Gallery, London, April – June 1973.

14. Theo Crosby, *How to play the environment game*, Harmondsworth, Penguin, 1973.

15. *ibid.*, pp 91–92.

16. Reyner Banham, *The Architecture of the Well-tempered Environment*, London, Architectural Press, 1969, pp.23–4.

17. *Architects' Journal*, *op.cit.*, p.202.

18. Medway Council, *Brompton Lines Conservation Area Appraisal*, Third Draft, April 2006.

19. *Architects' Journal*, *op.cit.*, p.209.